25X1

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EI - 382/63
2 September 1963
Copy No. 4

MEMORANDUM FOR: Chief, Geographic Division, OCR

25X1 ATTENTION: [redacted]

FROM: Chief, CIA/PID (NPIC)

SUBJECT: Szechwan - Tibet Highway Study

REFERENCES: (1) Requirement OCR/50/63
(2) Project C 447/63

1. This memorandum is in response to the referenced requirement requesting:

a. The preparation of annotated maps noting the location, identification, and the status or condition of the Szechwan - Tibet Highway. This is to include bridges, ferries, POL storage, tunnels and repair facilities.

b. The location of electric power, industrial, military and mining facilities, and the inclusion of prints enlargements of same.

2. Per your request, all available photography was utilized in this study. The missions numbers and dates are as follows:

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[redacted] automatically and declassification

3. AMS maps Series 1301, scale 1/1,000,000, were substituted for the AMS L500, scale 1/250,000, which you had requested, as there are no AMS L500 covering this area which have been printed at this time. All measurements included in this memorandum are only approximate and should be treated accordingly.

4. The Szechwan - Tibet Highway is a well maintained, improved, 25X1 two-lane [redacted], graded, earth surfaced road, probably reinforced with gravel or crushed stone. Several small convoys of military vehicles were observed on the highway, with the traffic density greatest between Ya-an and Tung-o-lo. The estimated average speed of vehicles, except in the hilly or mountainous areas should be relatively high for this type of road.

5. The construction of the highway constituted a major engineering endeavor. In addition to the many wide streams and rivers which had to be bridged, and the large number of mountain ranges which had to be traversed, this roadbed, following the line of least resistance along narrow river valleys, had to be dug into the sides of steep valley walls for long stretches at numerous locations. The road is therefore subject to landslides, and a large number of these were observed on the photography. The road has several long bridges which, if destroyed, would be extremely difficult to replace. Bridge No. 15, a 20 x 400' three-span suspension bridge hanging high above the Yangtze Kiang (River) at Gangto, would be most difficult to replace. The steep gorge of the river, particularly on the Yangtze, makes crossing, even with the aid of a ferry, a very difficult operation. All bridges observed appeared to be designed to carry heavy vehicular loads. Short spans are constructed of masonry or reinforced concrete, and the long spans are steel, supported by reinforced concrete or masonry piers and abutments.

6. The following is a detailed description of the Szechwan - Tibet Highway from Ya-an (29 58N - 103 12E) to Chamdo (31 09N - 97 17E). Maps, CIA/PID/IB-P-417/63 and CIA/PID/IB-P-418/63, show the alignment of these roads, and they also repeat map information on the Yunnan - Tibet Highway study previously submitted to your office. Proceeding westward from Ya-an, this road follows the river valleys to Tung-o-lo (30 05N - 101 41E). Here the road is relatively level. The only major engineering construction problems encountered on this section were river crossings and a few stretches where the roadbed had to be dug into the side of mountains. At Tung-o-lo the Szechwan - Tibet Highway turns northeastward to Kasa (31 42N - 100 23E). The road generally follows narrow river valleys with steep banks. There is one very difficult section where the road must go through Minia Pass (30 47N - 101 27E). At Kasa the road turns westward through Gangto to Chamdo (31 09N - 97 17E). This section of the road (est. 200 miles) was constructed over some very difficult terrain. There are a number of mountain ranges which had to be crossed and several rivers with deep gorges, such as the Yangtze Kiang, which had to be bridged.

7. The most important road which branches from the Szechwan - Tibet Highway proceeds westward from Tung-o-lo through Batang to the Yangtze Kiang River. The road is constructed to the same general engineering specifications as the Szechwan - Tibet Highway. This road appeared to be well maintained, however, little traffic was observed along the route in comparison with the main road. The road was constructed through some very high terrain, some of which had very steep local relief. The most difficult sections are just west of Tung-o-lo at Rama Pass (30 00N - 100 00E), at Wangi Pass (30 00N - 100 38E) and again at Rathi Pass (29 45N - 99 30E). The road terminates at the bank of the Yangtze Kiang River at 29 50N - 98 57E. At this point a very primitive ferry was observed in operation crossing the river. No landing facility, such as piers, were observed on either bank to assist in unloading or loading of vehicles. The ferry appeared to be designed to carry personnel and possibly pack-animals rather than even the lightest of motor vehicles. This branch road has an improved road which branches northwestward at Litang (29 58N - 100 23E) and proceeds up river valleys over relatively level terrain to 30 35N - 99 42E where photo coverage of this branch ends. The road and its bridges appear to be constructed according to the same specifications as the Szechwan - Tibet Highway and the Tung-o-lo - Batang road.

8. Information concerning bridges observed along the Szechwan - Tibet Highway is as follows: (See enclosed annotated maps with corresponding Bridge Nos. for bridge locations).

Bridge No. 1
Deck type
Six spans (est.)
Steel girder over concrete piers and abutments
25X1 [redacted]
Height above water 50'
Water gap 195'
Photo No. CIA/PID/IB-P-420/63 shows bridges 1 and 2

Bridge No. 2
Deck-arch
Seven spans (est.)
25X1 [redacted]

Bridge No. 3
Suspension bridge
Three spans
Concrete abutments
25X1 [redacted]
Height above water 75'
Water gap 85'
Photo No. CIA/PID/IB-P-421/63 shows this bridge

Bridge No. 4
Deck-girder
Four spans (est.)
25X1 [redacted]
Photo No. CIA/PID/IB-P-422/63 shows bridges 4 and 5

Bridge No. 5
Deck-type
25X1 [redacted]

Bridge No. 6
Deck-type
Four spans (est.)
20' x 200'
Photo No. CIA/PID/IB-P-423/63 shows bridges 6, 7 and 8

Bridge No. 7
Deck-type
Four spans (est.)
25X1 [redacted]

Bridge No. 8
Deck-type
One span (est.)
25X1 [redacted]

Bridge No. 9
Deck-type
Three spans (est.)
25X1 [redacted]
Photo No. CIA/PID/IB-P-424/63 shows bridge 9 and 10

Bridge No. 10
Deck-girder
Four spans
25X1 [redacted]

Bridge No. 11
Suspension type
Three spans
Steel girder with reinforced concrete abutments
25X1 [redacted]
Clear gap 135'
Photo No. CIA/PID/IB-P-425/63 shows this bridge

Bridge No. 12
Deck-girder
One span (est.)
25X1 [redacted]
Photo No. CIA/PID/IB-P-427/63 shows this bridge

Bridge No. 13
Deck-girder
Three spans
Reinforced concrete girders on concrete piers and abutments
25X1 [redacted]
Photo No. CIA/PID/IB-P-428/63 shows this bridge

Bridge No. 14
Deck-girder
Single span
25X1 [redacted]
Photo No. CIA/PID/IB-P-429/63 shows this bridge

Bridge No. 15 at Gangto (31 37N - 93 43E)
Suspension type
Three spans
Steel beams on concrete piers and abutments
20'x 390'
Height above water 55'
Longest span 260'
Water gap 135'
Photo No. CIA/PID/IB-P-431/63 shows this bridge

Bridge No. 16
Deck-girder
One span (est.)
15'x 140'
Photo No. CIA/PID/IB-P-432 and 434/63 shows this bridge

Bridge No. 17
Deck-girder
Single span
25X1 [redacted]
Photo No. CIA/PID/IB-P-435/63 shows this bridge

Bridge No. 18
Deck-girder, [illegible]
Five spans
Reinforced concrete roadbed on concrete piers and abutments
25X1 [redacted]
NOTE: The extra thickness of the longest (center) span, and also the webbing effect of possible steel supports. These "supports" are all on the one and the same side of the piers. This could possibly indicate that they expect all the heavy loads to go in one direction and that direction is toward the Indian Border. This could also be the beginning of a

framework to support the forms into which concrete would be poured for reinforcing the lighter concrete beams. This same "webbing effect" is also visible under bridge no. 19.

Photo No. CIA/PID/IB-P-435/63 shows bridges 18 and 19

Bridge No. 19
Deck-girder
Three spans
Reinforced concrete roadbed on concrete piers and abutments

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ENCLOSURES:
2 Maps (CIA/PID/IB-P-417/63 - P-418/63)
17 Photos (CIA/PID/IB-P-419/63 - P-435/63)

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